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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,397	04/10/2001	Noam A. Ziv	PA190C1	8544
23696 7590 06/11/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
D AGOSTA, STEPHEN M				
ART UNIT		PAPER NUMBER		
2617				
NOTIFICATION DATE		DELIVERY MODE		
06/11/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com

kascanla@qualcomm.com

namn@qualcomm.com

## Office Action Summary

**Application No.**

09/832,397

**Applicant(s)**

ZIV ET AL.

**Examiner**

Stephen M. D'Agosta

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date: \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

1. The amendment overcomes the USC 101/112 rejections.
2. The Double Patenting rejection is upheld and a Terminal Disclaimer is requested. The amendment includes concepts that are a) still well known in the art, b) inherent since A-to-D conversion is required when connecting an Analog network/user to a Digital network/user, c) taught by the prior art and d) found in the parent application.

Newly added art (Baran, '425) shows both Analog and Digital phone users with analog/digital PBX's, Channel Banks for A/D conversion and PCM/T1 digital packet network that supports PCM links as well as the converted/vocoded digital packets (eg. similar to VoIP – see Figure 3a).

3. New rejection found attached.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 28-38** rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,292,662. Although the conflicting claims are not identical, they are not patentably distinct from each other because both recite routing/coding of a call between two wired/wireless users whereby said call is routed via wireless/wired networks to include VoIP/Packet networks and conversion between Analog and Digital users/networks.

- Please send a Terminal Disclaimer with any new correspondence.
- *NOTE: The examiner could also put forth a Double Patent rejection that uses a secondary reference, eg. Baran, to show obviousness.*

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 28-38** rejected under 35 U.S.C. 103(a) as being unpatentable over Kotzin and further in view of Roach and {Widmark or Munk} and Baran ('425).

As per **claims 28, 31, 33, 35 and 38**, Kotzin teaches a method for processing a telephone call from a first subscriber unit that is part of a first wireless telephone system (figure 2 shows mobile users/infrastructure connecting to wired users via PSTN), the method comprising:

receiving a request to make the telephone call to a second subscriber unit (figure 2 shows that wireless users can connect to wired users and vice versa);

determining whether the second subscriber unit is part of the first wireless telephone system AND routing "voice" data from the first subscriber unit to the second subscriber unit within the first wireless telephone system if the second subscriber unit is part of the first wireless telephone system (figure 2 shows that wireless/wired users can call each other and inherently requires any/all routing and signal translation; and

(14) Access by an MS to a local BTS may allow the MS telephony access to a communication target, such as another MS, served by the same, or another BTS, or to a subscriber within a public switched telephone network (PSTN). Access by the MS to a local BTS may also provide the MS access to a diversity of other data services.

In general, communication access is provided to the MS through a cellular infrastructure system which, in the case of a PSTN target, may include the BTS, a base station controller (BSC), a mobile switching center (MSC), and the PSTN network. Under GSM, a BSC may control a number of BTSs. An MSC, connected to the PSTN network, may control a number of BSCs. (C2, L58 to C3, L3).

**But is silent on** vocoders and conversion to tones AND converting the voice data and routing the tones through a wire-based telephone system to the second subscriber unit if the second subscriber unit is part of a second wireless telephone system AND use of a digital packet network connection using PCM format and not connected through the digital packet network wherein the PCM formatted packets are converted back into vocoded packets by a second wireless telephone system.

The examiner notes that cellular systems began as analog systems and migrated to digital. The PSTN is analog and thus would require a "translating/conversion" if when a wireless caller is connecting to a wired caller (or vice versa). The vocoder (eg. voice coder/decoder) is a well known component which translates/codes the human voice from analog into an encoded signal with a certain number of bits/resolution and would be used by the mobile phone to convert the human voice for RF transmission, but a translation would be needed in order to route the signal to/from the PSTN.

**Roach** teaches a wireless digital network whereby conversion is performed to route calls between wired and wireless users (eg. translation, signaling, etc. is performed), see Abstract and figures. Roach also teaches explicit use of vocoders (C13, L1-38).

Regarding routing a call from the wireless network to a wired network, this would be required if/when the two users are part of different wireless networks and/or possibly when the call is a long-distance call. It is "***inherent***" that the networks must identify where the two users are located and how to connect them (eg. use PSTN network or not):

a. **Widmark** clearly teaches connecting two mobile users (connected to two different MSC/networks via a PSTN network, Abstract, figures 1, 3, 5, 7)

b. **Munk**, from applicant's IDS also teaches a wireless subscriber connecting to a PSTN network to connect to another user (see Abstract, figure 1). The other user could be either connected to the PSTN or to a wireless network.

**Baran** teaches a heterogeneous network between Analog and Digital users and a digital packet network connecting them together (figure 1). Figure 1 clearly shows analog users and Analog PBX (56, 58, 44) and Channel Bank which converts A-to-D (46) as well as Digital users and Digital PBX (60, 62, 46) and Digital Packet Network #12 that supports Voice/Data packets as shown in figure 3a. Hence, any connection between Analog and Digital users will inherently require the transformation as taught by Baran.

It would have been obvious to one skilled in the art at the time of the invention to modify Kotzin, such that vocoders and conversion to tones is supported using PCM/Digital packet networks, to provide means for connecting wired and wireless users together who are digital and analog users.

**With further regard to claim 33**, the prior art above teaches connections to the PSTN which supports either local or long distance calling.

**With further regard to claim 38**, note that the above art disclose both hardware and software (eg. computer readable programs) to perform the tasks identified.

As per **claims 29 and 36**, the combo teaches claim 28/35, wherein converting and routing further comprising: signaling to the second wireless system that the vocoded data will be transmitted in tones (both Sammarco and Dahlin, pertinent but not cited previously, teach use of coding/vocoding and handshake/signaling would inherently be required to establish the link as well as setup any/all parameters needed for optimal communication, eg. type of signal, channel rate, etc., which reads on the claim). Furthermore, Baran shows digital and analog users with conversion between the two (eg. via channel banks, etc. see figure 1 and 3a).

As per **claims 30, 32, 34 and 37**, the combo teaches claim 28/31/32/35, **but is silent on** wherein converting and routing further comprising: establishing an all digital (or ATM) link to the second wireless telephone system; and delivering the vocoded data to the second wireless system over the all digital (or ATM) link.

The examiner notes that use of different links is well known and one skilled can select analog, digital, different rates, different transmission protocols such as T1/T3, Sonet, ATM, IP-based, TDMA/FDMA, etc.. Hence an all digital link would be used by one skilled.

Widmark and Munk teach use of PSTN "wired" connections and Munk specifically discloses support for ATM (page 5, point #4). See also Baran who teaches both analog and digital users – digital users can directly connect to each other via the T1 links/network while analog users must be converted via channel bank/vocoder/etc..

Note that the prior art of record teaches myriad ways/designs in which to transmit/receive data (ISDN, RF, TDMA/FDMA, cellular, etc.).

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that an all digital/ATM link is established, to provide means for supporting the transmission of data to/from users via many different conveyances, eg. analog/digital, different protocols, etc..

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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/Stephen M. D'Agosta/  
Primary Examiner, Art Unit 2617